

TO: Mail Stop 8 Director of the U.S. Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
filed in the U.S. District Court Northern District of California on the following ☒ Patents or ☐ Trademarks:

DOCKET NO. CV 10-05525 PVT	DATE FILED 12/6/2010	U.S. DISTRICT COURT 280 South First Street, Room 2112, San Jose, CA 95113
PLAINTIFF ZIPTRONIX, INC.		DEFENDANT OMNIVISION TECHNOLOGIES, INC., ET AL.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,387,944		SEE ATTACHED COMPLAINT
2 7,335,572		
3 7,553,744		
4 7,037,755		
5 6,864,585		

In the above—entitled case, the following patent(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1 7,807,549			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK Richard W. Wicking	(BY) DEPUTY CLERK Betty Walton	DATE December 7, 2010
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1 35. Upon information and belief, Defendant Taiwan Semiconductor Manufacturing
2 Company Ltd. and/or Defendant TSMC North America Corp.'s infringement of the '744 Patent
3 has been willful and deliberate, despite an objectively high likelihood that their actions constitute
4 infringement of the '744 Patent.

5 36. Ziptronix has been and will continue to be damaged and irreparably injured unless
6 this Court enjoins each Defendant's infringing activities.

7 **CLAIM IV – INFRINGEMENT OF U.S. PATENT NO. 7,037,755**

8 37. The allegations contained in Paragraphs 1 through 36 above are incorporated herein
9 by reference.

10 38. On May 2, 2006, the United States Patent and Trademark Office duly and lawfully
11 issued United States Patent No. 7,037,755 entitled "Three Dimensional Device Integration Method
12 and Integrated Device" (hereinafter referred to as "the '755 Patent"). Ziptronix is the lawful
13 owner of all right, title, and interest in and to the '755 Patent, including the right to sue for and
14 recover for infringement thereof. The term of the '755 Patent has not expired. A true and correct
15 copy of the '755 Patent is attached hereto as Exhibit D.

16 39. Omnivision has made, used, offered to sell, sold, and/or imported into the United
17 States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV
18 9726, and continues to do so, all without authority from the patent holder. Upon information and
19 belief, the method used to make these image sensors includes: forming a first layer of bondable
20 material on a first semiconductor device having a first substrate; forming a second layer of
21 bondable material on a first element having a second substrate; polishing each of said first and
22 second layers of bondable materials after said forming steps; bringing into direct contact said first
23 layer of bondable material with said second layer of bondable material after said polishing;
24 directly bonding without fusing said first layer of bondable material to said second layer of
25 bondable material; and removing a portion of said first substrate to leave a remaining portion of
26 said first semiconductor device after said bonding. Presentations and other public documents
27 describing Omnivision's products demonstrate that Omnivision makes its image sensors using
28 such a method.

1 40. Omnivision has directly infringed, contributorily infringed, and/or induced the
2 infringement of the '755 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c),
3 271(f) and/or 271(g), including but not limited to independent Claim 1, and dependent Claims 14,
4 15, 29, 38, 39, 44 and 47 of the '755 Patent and continues to do so.

5 41. Upon information and belief, Omnivision's infringement of the '755 Patent has
6 been willful and deliberate, despite an objectively high likelihood that its actions constitute
7 infringement of the '755 Patent.

8 42. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant
9 TSMC North America Corp. have made, used, offered to sell, sold, and/or imported into the
10 United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810
11 and OV 9726, and continue to do so, all without authority from the patent holder. Upon
12 information and belief, the method used to make these image sensors includes: forming a first
13 layer of bondable material on a first semiconductor device having a first substrate; forming a
14 second layer of bondable material on a first element having a second substrate; polishing each of
15 said first and second layers of bondable materials after said forming steps; bringing into direct
16 contact said first layer of bondable material with said second layer of bondable material after said
17 polishing; directly bonding without fusing said first layer of bondable material to said second layer
18 of bondable material; and removing a portion of said first substrate to leave a remaining portion of
19 said first semiconductor device after said bonding. Presentations and other public documents
20 describing the above products in conjunction with Defendant Taiwan Semiconductor
21 Manufacturing Company Ltd. and/or Defendant TSMC North America Corp.'s activities
22 demonstrate that they make these image sensors using such a method.

23 43. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant
24 TSMC North America Corp. have directly infringed, contributorily infringed, and/or induced the
25 infringement of the '755 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c),
26 271(f) and/or 271(g), including but not limited to independent Claim 1, and dependent Claims 14,
27 15, 29, 38, 39, 44 and 47 of the '755 Patent and continue to do so.

28 //

1 44. Upon information and belief, Defendant Taiwan Semiconductor Manufacturing
2 Company Ltd. and/or Defendant TSMC North America Corp.'s infringement of the '755 Patent
3 has been willful and deliberate, despite an objectively high likelihood that their actions constitute
4 infringement of the '755 Patent.

5 45. Ziptronix has been and will continue to be damaged and irreparably injured unless
6 this Court enjoins each Defendant's infringing activities.

7 **CLAIM V – INFRINGEMENT OF U.S. PATENT NO. 6,864,585**

8 46. The allegations contained in Paragraphs 1 through 45 above are incorporated herein
9 by reference.

10 47. On March 8, 2005, the United States Patent and Trademark Office duly and
11 lawfully issued United States Patent No. 6,864,585 entitled "Three Dimensional Device
12 Integration Method and Integrated Device" (hereinafter referred to as "the '585 Patent").
13 Ziptronix is the lawful owner of all right, title, and interest in and to the '585 Patent, including the
14 right to sue for and recover for infringement thereof. The term of the '585 Patent has not expired.
15 A true and correct copy of the '585 Patent is attached hereto as Exhibit E.

16 48. Omnivision has made, used, offered to sell, sold, and/or imported into the United
17 States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV
18 9726, and continues to do so, all without authority from the patent holder. Upon information and
19 belief, the structure of these image sensors includes: a plurality of first semiconductor devices
20 respectively disposed in first substrate portions; a first layer of bonding material disposed on each
21 of said plurality of first semiconductor devices, said first layer having a first polished surface; and
22 a first element having a second polished surface consisting of polished bonding material; each of
23 said first polished surfaces bonded in direct contact with said second polished surface without
24 fusing and with a bond strength sufficient to allow removal of a portion of each of a plurality of
25 said first substrate portions after said first polished surfaces are bonded to said polished surface.
26 Presentations and other public documents describing Omnivision's products demonstrate that
27 Omnivision makes such image sensors.

28 //

49. Omnivision has directly infringed, contributorily infringed, and/or induced the infringement of the '585 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c), 271(f) and/or 271(g), including but not limited to independent Claim 87, and dependant Claims 88, 90, 91, 96, 97 and 99 of the '585 Patent and continues to do so.

50. Upon information and belief, Omnivision's infringement of the '585 Patent has been willful and deliberate, despite an objectively high likelihood that its actions constitute infringement of the '585 Patent.

51. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North America Corp. have made, used, offered to sell, sold, and/or imported into the United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV 9726, and continue to do so, all without authority from the patent holder. Upon information and belief, the structure of these image sensors includes: a plurality of first semiconductor devices respectively disposed in first substrate portions; a first layer of bonding material disposed on each of said plurality of first semiconductor devices, said first layer having a first polished surface; and a first element having a second polished surface consisting of polished bonding material; each of said first polished surfaces bonded in direct contact with said second polished surface without fusing and with a bond strength sufficient to allow removal of a portion of each of a plurality of said first substrate portions after said first polished surfaces are bonded to said polished surface. Presentations and other public documents describing the above products in conjunction with Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North America Corp.'s activities demonstrate that they make such image sensors.

52. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North America Corp. have directly infringed, contributorily infringed, and/or induced the infringement of the '755 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c), 271(f) and/or 271(g), including but not limited to independent Claim 87, and dependant Claims 88, 90, 91, 96, 97 and 99 of the '585 Patent and continue to do so.

53. Upon information and belief, Defendant Taiwan Semiconductor Manufacturing

1 Company Ltd. and/or Defendant TSMC North America Corp.'s infringement of the '585 Patent
2 has been willful and deliberate, despite an objectively high likelihood that their actions constitute
3 infringement of the '585 Patent.

4 54. Ziptronix has been and will continue to be damaged and irreparably injured unless
5 this Court enjoins each Defendant's infringing activities.

6 **CLAIM VI – INFRINGEMENT OF U.S. PATENT NO. 7,807,549**

7 55. The allegations contained in Paragraphs 1 through 54 above are incorporated herein
8 by reference.

9 56. On October 5, 2010, the United States Patent and Trademark Office duly and
10 lawfully issued United States Patent No. 7,807,549 entitled "Method for Low Temperature
11 Bonding and Bonded Structure" (hereinafter referred to as "the '549 Patent"). Ziptronix is the
12 lawful owner of all right, title, and interest in and to the '549 Patent, including the right to sue for
13 and recover for infringement thereof. The term of the '549 Patent has not expired. A true and
14 correct copy of the '549 Patent is attached hereto as Exhibit F.

15 57. Omnivision has made, used, offered to sell, sold, and/or imported into the United
16 States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV
17 9726, and continues to do so, all without authority from the patent holder. Upon information and
18 belief, the method used to make these image sensors includes: exposing a first surface of a first
19 element to a plasma to at least enhance activation of said first surface; terminating said first
20 surface with a species capable of forming a chemical bond with a bond strength of at least 500
21 mJ/m² without heating to a temperature more than about 200°C; and bringing together said first
22 surface and a second surface of a second element after said terminating; and obtaining a chemical
23 bond with a bond strength of at least 500 mJ/m². Presentations and other public documents
24 describing Omnivision's products demonstrate that Omnivision makes its image sensors using
25 such a method.

26 58. Upon information and belief, the structure of the image sensors discussed above in
27 Paragraph 57 also includes: a first material having a first bonding surface; a second material
28 having a second bonding surface; said first bonding surface having enhanced surface activation;

1 said first bonding surface terminated with species allowing formation of chemical bonds of a
2 strength of at least 500 mJ/m2 at a temperature of no more than about 200°C; and a chemical bond
3 formed between said first material and said second material.

4 59. Omnivision has directly infringed, contributorily infringed, and/or induced the
5 infringement of the '549 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c),
6 271(f) and/or 271(g), including but not limited to independent Claims 38, 49 and 81, and
7 dependant Claims 40 48, 50-77, 78, 82-98 and 99-111 of the '549 Patent and continues to do so.

8 60. Upon information and belief, Omnivision's infringement of the '549 Patent has
9 been willful and deliberate, despite an objectively high likelihood that its actions constitute
10 infringement of the '549 Patent.

11 61. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant
12 TSMC North America Corp. have made, used, offered to sell, sold, and/or imported into the
13 United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810
14 and OV 9726, and continue to do so, all without authority from the patent holder. Upon
15 information and belief, the method used to make these image sensors includes: exposing a first
16 surface of a first element to a plasma to at least enhance activation of said first surface;
17 terminating said first surface with a species capable of forming a chemical bond with a bond
18 strength of at least 500 mJ/m2 without heating to a temperature more than about 200°C; and
19 bringing together said first surface and a second surface of a second element after said
20 terminating; and obtaining a chemical bond with a bond strength of at least 500 mJ/m2.
21 Presentations and other public documents describing the above products in conjunction with
22 Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North
23 America Corp.'s activities demonstrate that they make these image sensors using such a method.

24 62. Upon information and belief, the structure of the image sensors discussed above in
25 Paragraph 61 also includes: a first material having a first bonding surface; a second material
26 having a second bonding surface; said first bonding surface having enhanced surface activation;
27 said first bonding surface terminated with species allowing formation of chemical bonds of a
28 strength of at least 500 mJ/m2 at a temperature of no more than about 200°C; and a chemical bond

1 formed between said first material and said second material.

2 63. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant
3 TSMC North America Corp. have directly infringed, contributorily infringed, and/or induced the
4 infringement of the '549 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c),
5 271(f) and/or 271(g), including but not limited to independent Claims 38, 49 and 81, and
6 dependant Claims 40-48, 50-77, 78, 82-98 and 99-111 of the '549 Patent and continue to do so.

7 64. Upon information and belief, Defendant Taiwan Semiconductor Manufacturing
8 Company Ltd. and/or Defendant TSMC North America Corp.'s infringement of the '549 Patent
9 has been willful and deliberate, despite an objectively high likelihood that its actions constitute
10 infringement of the '549 Patent.

11 65. Ziptronix has been and will continue to be damaged and irreparably injured unless
12 this Court enjoins each Defendant's infringing activities.

13 66.

14 **PRAYER FOR RELIEF**

15 WHEREFORE, Ziptronix respectfully seeks that the Court grant the following relief:

- 16 1. Enter judgment for Ziptronix and against each Defendant for infringement
17 of the '944 Patent;
- 18 2. Enter judgment for Ziptronix and against each Defendant for infringement
19 of the '572 Patent;
- 20 3. Enter judgment for Ziptronix and against each Defendant for infringement
21 of the '744 Patent;
- 22 4. Enter judgment for Ziptronix and against each Defendant for infringement
23 of the '755 Patent;
- 24 5. Enter judgment for Ziptronix and against each Defendant for infringement
25 of the '585 Patent;
- 26 6. Enter judgment for Ziptronix and against each Defendant for infringement
27 of the '549 Patent;
- 28 7. Enter judgment that the infringement of each Defendant was and is willful;

- 1 8. Permanently enjoin each Defendant, its officers, directors, principals,
2 agents, sales representatives, servants, employees, successors, assigns,
3 affiliates, subsidiaries and all those acting in concert or participation with
4 them, from directly or indirectly infringing, inducing infringement or
5 contributing to the infringement of any claim of the '944 Patent, the '572
6 Patent, '744 Patent, the '755 Patent, the '585 Patent, or the '549 Patent;
- 7 9. Enter judgment in favor of Ziptronix and against each Defendant for an
8 amount that will adequately compensate it for each Defendant's
9 infringement, but under no circumstances an amount less than a reasonable
10 royalty for each Defendant's use of Ziptronix's patented inventions;
- 11 10. Enter judgment in favor of Ziptronix and against each Defendant for pre-
12 judgment interest on all damages awarded;
- 13 11. Enter judgment in favor of Ziptronix and against each Defendant for three
14 times the amount of damages pursuant to 35 U.S.C. § 284 because of their
15 willful infringement;
- 16 12. Enter judgment in favor of Ziptronix and against each Defendant for
17 Ziptronix's attorneys' fees and costs pursuant to 35 U.S.C. § 285;
- 18 13. Enter judgment in favor of Ziptronix and against each Defendant for
19 Ziptronix's costs of suit; and
- 20 14. Enter such other and further relief as the Court may deem just and proper.³

21 DATED: December 6, 2010

Respectfully submitted,

22 ALSTON & BIRD LLP

23 By: 

24 Sean P. DeBruine

25 Attorneys for Plaintiff
26 ZIPTRONIX, INC.

27 ³ Depending on the outcome of prosecution, Ziptronix may also assert U.S. Patent App. Ser.
28 Nos. 12/493,957 and 12/720,368. Each Defendant is on notice of these patent applications under
the relevant provisions of 35 U.S.C. § 154(d), and Ziptronix reserves the right to seek any remedy
permitted under 35 U.S.C. § 154(d).

DEMAND FOR JURY TRIAL

Plaintiff Ziptronix hereby demands a jury trial for all issues so triable.

DATED: December 6, 2010

Respectfully submitted,

ALSTON & BIRD LLP

Bv:

Sean P. DeBruine

Attorneys for Plaintiff
ZIPTRONIX, INC.

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11 Attorneys for Plaintiff
ZIPTRONIX, INC

12
13 UNITED STATES DISTRICT COURT
14 NORTHERN DISTRICT OF CALIFORNIA
15 SAN FRANCISCO DIVISION

16
17 ZIPTRONIX, INC.,

18 Plaintiff,

19 v.

20 OMNIVISION TECHNOLOGIES, INC.,
21 TAIWAN SEMICONDUCTOR
MANUFACTURING COMPANY LTD., and
22 TSMC NORTH AMERICA CORP.

23 Defendants.
24

25 Plaintiff Ziptronix, Inc., by and through counsel, for its Complaint against Defendants
26 Omnivision Technologies, Inc. ("Omnivision"), Taiwan Semiconductor Manufacturing Company,
27 LTD., and TSMC North America Corp. (collectively "Defendants"), alleges on knowledge as to
28 its actions, and upon information and belief as to the actions of others, as follows:

E-filing

ORIGINAL FILED

DEC - 6 2010

Richard W. Winking
Clerk, U.S. District Court
Northern District of California
San Jose

ADR

CV 10-05525

PVT

Case No.:

COMPLAINT FOR PATENT
INFRINGEMENT

DEMAND FOR JURY TRIAL

1 THE PARTIES

2 1. Plaintiff Ziptronix, Inc. (hereinafter referred to as "Ziptronix"), a North Carolina
3 corporation with its principal place of business in Morrisville, North Carolina, is a leader in the
4 development of innovative technologies concerning semiconductor integration processes, and is
5 the owner by assignment of patents covering innovative technologies related to advanced
6 semiconductor processing. These technologies represent significant advances in the field of
7 semiconductor processing that allow for, among other things, specialized bonding of surfaces and
8 materials.

9 2. Defendant Omnivision Technologies, Inc. is a Delaware corporation and is
10 headquartered at 4275 Burton Drive, Santa Clara, California 95054. Omnivision produces,
11 manufactures, imports, sells and/or offers for sale image sensors in the United States.

12 3. Defendant Taiwan Semiconductor Manufacturing Company Ltd. is a Taiwanese
13 corporation and is headquartered at No. 8, Li-Hsin Rd. VI, Hsinchu, Taiwan 300, R.O.C., and has
14 its U.S. subsidiary, Defendant TSMC North America Corp., headquartered at 2585 Junction
15 Avenue, San Jose, California 95134. Defendant Taiwan Semiconductor Manufacturing Company
16 Ltd. and/or Defendant TSMC North America Corp. produce(s), manufacture(s), import(s), sell(s)
17 and/or offer(s) for sale image sensors in the United States.

18 JURISDICTION AND VENUE

19 4. This action arises under the Patent Act, Title 35 of the United States Code, and is
20 an action for patent infringement under § 271.

21 5. This Court has jurisdiction over the subject matter of this action pursuant to 28
22 U.S.C. §§ 1331 and 1338(a).

23 6. This Court has personal jurisdiction over the Defendants under the provisions of
24 Cal. Code of Civ. Pro. § 410.10 and consistent with the underlying due process principles of the
25 U.S. Constitution. Upon information and belief, each Defendant is doing business in this State
26 and District, has significant contacts in this State and District, has offered for sale and/or sold
27 infringing products or products made by an infringing process in this State and District, has
28 purposely shipped or caused to be shipped infringing products or products made by an infringing

process into this State and District through established distribution channels, and/or has committed acts in this State and District that are the subject of the counts set forth herein.

7. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

CLAIM I – INFRINGEMENT OF U.S. PATENT NO. 7,387,944

8. The allegations contained in Paragraphs 1 through 7 above are incorporated herein by reference.

9. On June 17, 2008, the United States Patent and Trademark Office duly and lawfully issued United States Patent No. 7,387,944 entitled “Method for Low Temperature Bonding and Bonded Structure” (hereinafter referred to as “the ‘944 Patent”). Ziptronix is the lawful owner of all right, title, and interest in and to the ‘944 Patent, including the right to sue for and recover for infringement thereof. The term of the ‘944 Patent has not expired. A true and correct copy of the ‘944 Patent is attached hereto as Exhibit A.

10. Omnivision has made, used, offered to sell, sold, and/or imported into the United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV 9726, and continues to do so, all without authority from the patent holder. Upon information and belief, the method used to make these image sensors includes: forming a silicon oxide material on a first element; exposing a surface of said silicon oxide material to a plasma RIE process; terminating said silicon oxide material with a species after said etching; bringing together said silicon oxide material, after¹ said etching and terminating steps, with a second element; and forming a chemical bond between said silicon oxide material and said second element. Presentations and other public documents describing Omnivision’s products demonstrate that Omnivision makes its image sensors using such a method.

11. Omnivision has directly infringed, contributorily infringed, and/or induced the infringement of the ‘944 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c), 271(f) and/or 271(g), including but not limited to independent Claims 49 and 63, and dependant Claims 50-55, 66-75, 77 and 79 of the ‘944 Patent and continues to do so.

¹ In the issued patent this term is printed as “alter” due to a mistake by the Patent Office.

1 12. Upon information and belief, Omnivision's infringement of the '944 Patent has
2 been willful and deliberate, despite an objectively high likelihood that its actions constitute
3 infringement of the '944 Patent.

4 13. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant
5 TSMC North America Corp. have made, used, offered to sell, sold, and/or imported into the
6 United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810
7 and OV 9726, and continue to do so, all without authority from the patent holder. Upon
8 information and belief, the method used to make these image sensors includes: forming a silicon
9 oxide material on a first element; exposing a surface of said silicon oxide material to a plasma RIE
10 process; terminating said silicon oxide material with a species after said etching; bringing together
11 said silicon oxide material, after² said etching and terminating steps, with a second element; and
12 forming a chemical bond between said silicon oxide material and said second element.

13 Presentations and other public documents describing the above products in conjunction with
14 Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North
15 America Corp.'s activities demonstrate that they make these image sensors using such a method.

16 14. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant
17 TSMC North America Corp. have directly infringed, contributorily infringed, and/or induced the
18 infringement of the '944 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c),
19 271(f) and/or 271(g), including but not limited to independent Claims 49 and 63, and dependent
20 Claims 50-55, 66-75, 77 and 79 of the '944 Patent and continue to do so.

21 15. Upon information and belief, Defendant Taiwan Semiconductor Manufacturing
22 Company Ltd. and/or Defendant TSMC North America Corp.'s infringement of the '944 Patent
23 has been willful and deliberate, despite an objectively high likelihood that their actions constitute
24 infringement of the '944 Patent.

25 16. Ziptronix has been and will continue to be damaged and irreparably injured unless
26 this Court enjoins each Defendant's infringing activities.

27
28 ² In the issued patent this term is printed as "alter" due to a mistake by the Patent Office.

CLAIM II – INFRINGEMENT OF U.S. PATENT NO. 7,335,572

17. The allegations contained in Paragraphs 1 through 16 above are incorporated herein by reference.

18. On February 26, 2008, the United States Patent and Trademark Office duly and lawfully issued United States Patent No. 7,335,572 entitled "Method for Low Temperature Bonding and Bonded Structure" (hereinafter referred to as "the '572 Patent"). Ziptronix is the lawful owner of all right, title, and interest in and to the '572 Patent, including the right to sue for and recover for infringement thereof. The term of the '572 Patent has not expired. A true and correct copy of the '572 Patent is attached hereto as Exhibit B.

19. Omnivision has made, used, offered to sell, sold, and/or imported into the United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV 9726, and continues to do so, all without authority from the patent holder. Upon information and belief, the method used to make these image sensors includes: exposing a first surface of a first element to a plasma; cleaning said first surface after exposure to said plasma and terminating said first surface with a chemical species in a same step; and bonding said first surface to a second surface of a second element after said terminating step. Presentations and other public documents describing Omnivision's products demonstrate that Omnivision makes its image sensors using such a method.

20. Omnivision has directly infringed, contributorily infringed, and/or induced the infringement of the '572 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c), 271(f) and/or 271(g), including but not limited to independent Claims 101, 124 and 152, and dependant Claims 102, 104, 107-109, 116-121, 125, 127, 130-134, 143-149, 155, 156 and 160 of the '572 Patent and continues to do so.

21. Upon information and belief, Omnivision's infringement of the '572 Patent has been willful and deliberate, despite an objectively high likelihood that its actions constitute infringement of the '572 Patent.

22. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North America Corp. have made, used, offered to sell, sold, and/or imported into the

1 United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810
2 and OV 9726, and continue to do so, all without authority from the patent holder. Upon
3 information and belief, the method used to make these image sensors includes: exposing a first
4 surface of a first element to a plasma; cleaning said first surface after exposure to said plasma and
5 terminating said first surface with a chemical species in a same step; and bonding said first surface
6 to a second surface of a second element after said terminating step. Presentations and other public
7 documents describing the above products in conjunction with Defendant Taiwan Semiconductor
8 Manufacturing Company Ltd. and/or Defendant TSMC North America Corp.'s activities
9 demonstrate that they make these image sensors using such a method.

10 23. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant
11 TSMC North America Corp. have directly infringed, contributorily infringed, and/or induced the
12 infringement of the '572 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c),
13 271(f) and/or 271(g), including but not limited to independent Claims 101, 124 and 152, and
14 dependant Claims 102, 104, 107 109, 116-121, 125, 127, 130-134, 143-149, 155, 156 and 160 of
15 the '572 Patent and continue to do so.

16 24. Upon information and belief, Defendant Taiwan Semiconductor Manufacturing
17 Company Ltd. and/or Defendant TSMC North America Corp.'s infringement of the '572 Patent
18 has been willful and deliberate, despite an objectively high likelihood that their actions constitute
19 infringement of the '572 Patent.

20 25. Ziptronix has been and will continue to be damaged and irreparably injured unless
21 this Court enjoins each Defendant's infringing activities.

22 **CLAIM III – INFRINGEMENT OF U.S. PATENT NO. 7,553,744**

23 26. The allegations contained in Paragraphs 1 through 25 above are incorporated herein
24 by reference.

25 27. On June 30, 2009, the United States Patent and Trademark Office duly and lawfully
26 issued United States Patent No. 7,553,744 entitled "Method for Low Temperature Bonding and
27 Bonded Structure" (hereinafter referred to as "the '744 Patent"). Ziptronix is the lawful owner of
28 all right, title, and interest in and to the '744 Patent, including the right to sue for and recover for

1 infringement thereof. The term of the '744 Patent has not expired. A true and correct copy of the
2 '744 Patent is attached hereto as Exhibit C.

3 28. Omnivision has made, used, offered to sell, sold, and/or imported into the United
4 States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV
5 9726, and continues to do so, all without authority from the patent holder. Upon information and
6 belief, the method used to make these image sensors includes: exposing a first surface of a first
7 element to a plasma to at least enhance activation of said first surface; terminating said first
8 surface with a species capable of forming a chemical bond with a bond strength of at least 500
9 mJ/m² without heating to a temperature more than about 200°C after exposure to said plasma; and
10 bonding said first surface to a second surface of a second element after said terminating step; and
11 obtaining a chemical bond with bond strength of at least 500 mJ/m². Presentations and other
12 public documents describing Omnivision's products demonstrate that Omnivision makes its image
13 sensors using such a method.

14 29. Upon information and belief, the structure of the image sensors discussed above in
15 Paragraph 28 also includes: first and second materials having first and second bonding surfaces,
16 respectively, at least one of said surfaces comprising an insulating material and at least one of said
17 surfaces having enhanced surface activation; at least one of said first and second bonding surfaces
18 terminated with species allowing formation of chemical bonds; and a chemical bond with a
19 strength of at least 500 mJ/m² formed between said first and second materials after annealing said
20 first and second materials at a temperature of no more than about 200°C.

21 30. Omnivision has directly infringed, contributorily infringed, and/or induced the
22 infringement of the '744 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c),
23 271(f) and/or 271(g), including but not limited to independent Claims 24, 31, and 41, and
24 dependent Claims 25, 27, 29, 30, 32-34, 36, 37, 39, 40, 44-45 and 47 of the '744 Patent and
25 continues to do so.

26 31. Upon information and belief, Omnivision's infringement of the '744 Patent has
27 been willful and deliberate, despite an objectively high likelihood that its actions constitute
28 infringement of the '744 Patent.

32. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North America Corp. have made, used, offered to sell, sold, and/or imported into the United States image sensors including at least OV 5642, OV 5650, OV 5653, OV 8812, OV 8810 and OV 9726, and continue to do so, all without authority from the patent holder. Upon information and belief, the method used to make these image sensors includes: exposing a first surface of a first element to a plasma to at least enhance activation of said first surface; terminating said first surface with a species capable of forming a chemical bond with a bond strength of at least 500 mJ/m² without heating to a temperature more than about 200°C after exposure to said plasma; and bonding said first surface to a second surface of a second element after said terminating step; and obtaining a chemical bond with bond strength of at least 500 mJ/m². Presentations and other public documents describing the above products in conjunction with Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North America Corp.'s activities demonstrate that they make these image sensors using such a method.

33. Upon information and belief, the structure of the image sensors discussed above in Paragraph 32 also includes: first and second materials having first and second bonding surfaces, respectively, at least one of said surfaces comprising an insulating material and at least one of said surfaces having enhanced surface activation; at least one of said first and second bonding surfaces terminated with species allowing formation of chemical bonds; and a chemical bond with a strength of at least 500 mJ/m² formed between said first and second materials after annealing said first and second materials at a temperature of no more than about 200°C.

34. Defendant Taiwan Semiconductor Manufacturing Company Ltd. and/or Defendant TSMC North America Corp. have directly infringed, contributorily infringed, and/or induced the infringement of the '744 Patent within the prohibitions of 35 U.S.C. §§ 271(a), 271(b), 271(c), 271(f) and/or 271(g), including but not limited to independent Claims 24, 31 and 41, and dependent Claims 25, 27, 29, 30, 32 34, 36, 37, 39, 40, 44-45 and 47 of the '744 Patent and continue to do so.

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